

In the claims:

1. (Currently Amended) A virtual biological fluid system for secure communications, said system comprising:

a primary gateway having security information;

a plurality of communication layers, and

a security control plane coupled to and formed using information from each of said plurality of communications layers, whereby said security control plane in conjunction with said security information forms a virtual biological fluid insuring secure data transmission.

2. (Original) The system as recited in claim 1, further comprising:  
at least one station in communication with said primary gateway; and  
a satellite in orbit and in communication with said primary gateway and said at least one station, and said security control plane is on board said satellite.

3. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is an application layer.

4. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is a presentation layer.

5. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is a session layer.

6. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is a transport layer.

7. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is a network layer.

8. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is a data link layer.

9. (Original) The system as recited in claim 1, wherein at least one of said plurality of communication layers is a physical layer.

10. (Currently Amended) A method for secure communications over a network, said method comprising the steps of:

generating security data;

forming a security control plane using information from each of a plurality of communication layers, said security control plane coupled to said plurality of communication layers;

forming a virtual biological fluid using said security control plane in conjunction with said security data, whereby secure data transmission between a ground gateway and a station may occur; and

communicating secure data between said ground gateway and said station.